The future in high-efficiency boilers and water heaters
The original innovators present the future in high-efficiency boilers and water heaters

As the original innovator of the fire tube boiler, creating warmth and comfort for families throughout North America is in our DNA.

Triangle Tube has been an industry leader in the manufacture and supply of quality stainless steel Hot Water Heating Equipment for over 70 years.

Our purpose is to deliver total comfort with heating and hot water products you can rely on.

Our motivation is to create warmth and happiness for families throughout North America.

Our goal is to offer complete peace of mind.
Contents

4 Why Choose Triangle Tube?
6 Market Leading Warranty
8 What We Do
10 Product Introduction
12 Instinct
14 Instinct Technical
16 Prestige
18 Prestige Technical
20 Smart

22 Smart Technical
24 Challenger
26 Challenger Technical
28 Keystone
30 Keystone Technical
32 Maxi Flo
34 Triangle Tube Academy
36 Testimonials
38 Brand Loyalty
Our products are engineered and manufactured with complete state-of-the-art reliability validation. This includes environmental testing of sub-assemblies, stress testing and simulated testing of appliances. The Instinct is built in the same unit that develops these techniques for Ideal Boilers, a leading UK boiler manufacturer, which produces over 400,000 units per year and meets the highest quality standards.

The Instinct is engineered with reliability in mind and each product is manufactured from our factory using the No-Fault Forward production system where products receive over 200 quality checks before they even leave the factory.
Introducing a warranty program that rewards both the contractor and home owner

Our Good, Better, Best market leading warranty program is available on all of our Instinct and Prestige models. Details of all of our warranties can be found at www.triangletube.com/support/warranties
Our ENTRY level warranty
- Offers 2-years parts and 10-year primary heat exchanger warranty with a Triangle Tube Instinct or Prestige boiler.

Our MID level warranty
- Offers 5-years parts, 2-years labor allowance and 10-year primary heat exchanger warranty with a Triangle Tube Instinct or Prestige boiler.
- When you register the installation (providing customer and contractor information).

Our HIGH level warranty
- Offers 6-years parts, 3-years labor allowance and 10-year primary heat exchanger warranty with a Triangle Tube Instinct or Prestige boiler.
- When you register the installation (providing customer and contractor information).
- Plus, upload a photo of the combustion readings from your combustion analyser.
- Your business will be added to the “find a contractor” section on the Triangle Tube website and highlighted as receiving the BEST warranty from the Triangle Tube warranty program.

10-year primary heat exchanger warranty
No matter which warranty you choose every Instinct and Prestige boiler comes with a 10-year heat exchanger warranty as standard.
Keeping families warm and comfortable is what we do

When you buy a Triangle Tube product, you’re not just a Triangle Tube customer, you’re part of our extended family.

As part of our extended family you should be assured, we are here for technical and customer support.
We’ve been industry leaders in manufacturing quality products for over 70 years

QUALITY ASSURANCE
With over 70 years of experience, you can trust we will always deliver the highest quality products.

RELIABILITY
Our quality products and knowledgeable team of experts means you can always count on us for a reliable service.

INNOVATION
Our innovative technology and practice ensures we deliver reliable heating and hot water products you can depend on.

MARKET-LEADING WARRANTY
We take pride in offering market-leading warranties that reward both the home owner and the contractor.

HIGH-EFFICIENCY
Our products lead the way in high-efficiency and provide the most energy saving solutions resulting in lower operating costs.

STAINLESS STEEL
The materials we use elevate our products to an outstanding level of reliability and durability resulting in happy customers.
Triangle Tube brings you the Instinct, the future of high-efficiency condensing boilers.

**INSTINCT SOLO 110 115 199**
**INSTINCT COMBI 155 199**

The Instinct is engineered with reliability in mind and each product is manufactured from our factory using the No-Fault Forward production system where products receive over 200 quality checks before they even leave the factory.
Trust your Instinct

FEATURES & BENEFITS

- AFUE energy efficiency rating of 95%
- CTRLMAX control system with 60 EZ second setup
- 3 in 1 universal vent adapter directly accepts PVC
- 439 Stainless-steel fire tube heat exchanger
- Part of our Good, Better, Best market-leading warranty program
- Industry leading performance with 5+ GPM hot water while fully condensing in DHW mode*
- Turndown ratio of 8:1
- Easy installation and serviceability
- Integrated cascade function for up to six boilers

Stainless-steel fire tube heat exchanger

The Instinct stainless-steel fire tube heat exchanger is manufactured and produced to the highest quality standards. ASME certified and pressure rated to 50PSI.

www.triangletube.com
## SPECIFICATIONS & FEATURES

<table>
<thead>
<tr>
<th>Instinct model</th>
<th>Solo 110</th>
<th>Solo 155</th>
<th>Solo 199</th>
<th>Combi 155</th>
<th>Combi 199</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Input (BTU)</td>
<td>13,750</td>
<td>19,375</td>
<td>24,875</td>
<td>19,375</td>
<td>24,875</td>
</tr>
<tr>
<td>Max Input (BTU)</td>
<td>110,000</td>
<td>155,000</td>
<td>199,000</td>
<td>155,000</td>
<td>199,000</td>
</tr>
<tr>
<td>Turndown Ratio</td>
<td>8:1</td>
<td>8:1</td>
<td>8:1</td>
<td>8:1</td>
<td>8:1</td>
</tr>
<tr>
<td>AFUE</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>DOE Heating Capacity (MBH)</td>
<td>102</td>
<td>142</td>
<td>184</td>
<td>142</td>
<td>184</td>
</tr>
<tr>
<td>AHRI Net Rating (MBH)</td>
<td>89</td>
<td>123</td>
<td>159</td>
<td>123</td>
<td>159</td>
</tr>
<tr>
<td>Fuel</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
</tr>
<tr>
<td>Gas Connection</td>
<td>3/4”</td>
<td>3/4”</td>
<td>3/4”</td>
<td>3/4”</td>
<td>3/4”</td>
</tr>
<tr>
<td>Supply / Return Connections</td>
<td>1”</td>
<td>1”</td>
<td>1”</td>
<td>1”</td>
<td>1”</td>
</tr>
<tr>
<td>Domestic Inlet/Outlet Connections</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3/4”</td>
<td>3/4”</td>
</tr>
<tr>
<td>Vent/Air Connections</td>
<td>3”</td>
<td>3”</td>
<td>3”</td>
<td>3”</td>
<td>3”</td>
</tr>
<tr>
<td>2” Maximum Vent Length</td>
<td>28”</td>
<td>28”</td>
<td>-</td>
<td>28”</td>
<td>-</td>
</tr>
<tr>
<td>3” Maximum Vent Length</td>
<td>100’</td>
<td>100’</td>
<td>100’</td>
<td>100’</td>
<td>100’</td>
</tr>
<tr>
<td>Water Volume (Gallons)</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>DHW Output GPM (70°F rise)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4.0</td>
<td>5.3</td>
</tr>
<tr>
<td>DHW Output GPM (75°F rise)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.7</td>
<td>4.9</td>
</tr>
<tr>
<td>DHW Output GPM (80°F rise)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.5</td>
<td>4.6</td>
</tr>
<tr>
<td>DHW Minimum Flow Rate (GPM)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>DHW Maximum Operating Pressure (PSI)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>CH Maximum Temperature (°F[°C])</td>
<td>185 (85)</td>
<td>185 (85)</td>
<td>185 (85)</td>
<td>185 (85)</td>
<td>185 (85)</td>
</tr>
<tr>
<td>DHW Maximum Temperature (°F[°C])</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>150 (65)</td>
<td>150 (65)</td>
</tr>
<tr>
<td>Cabinet Height</td>
<td>26”</td>
<td>26”</td>
<td>26”</td>
<td>33”</td>
<td>33”</td>
</tr>
<tr>
<td>Cabinet Depth</td>
<td>16 1/2”</td>
<td>16 1/2”</td>
<td>16 1/2”</td>
<td>16 1/2”</td>
<td>16 1/2”</td>
</tr>
<tr>
<td>Weight (Lbs)</td>
<td>75</td>
<td>95</td>
<td>105</td>
<td>110</td>
<td>130</td>
</tr>
</tbody>
</table>
The flagship line of premium condensing fire tube gas boilers

Prestige Solo 80 110 155 175 250 299 399
Prestige Excellence 110

The Prestige boiler continues to feature the uniquely designed stainless steel heat exchanger and boasts 95% efficiency across the entire range.

The Prestige has the capability to modulate with a turndown ratio of 5.5:1. This modulation means the boiler will alter its firing rate to meet the current demand, causing less cyclic behavior and resulting in lower operating costs.
High-efficiency condensing boilers

FEATURES & BENEFITS

- AFUE energy efficiency rating of 95%
- CTRLMAX control system with 60 EZ second setup
- Integrated cascade function for up to six boilers
- 439 stainless-steel fire tube heat exchanger
- Part of our Good, Better, Best market-leading warranty program
- Turndown ratio of 5:1
- High water content provides stable temperature control
- Reliable low maintenance design - ASME certified
- Extensive venting options with a range of materials

439 stainless-steel heat exchanger

Our unique fire tube heat exchanger is not only corrosion resistant it’s also designed to maximize heat transfer with low thermal stress. This results in peace of mind with unparalleled reliability and longevity.

www.triangletube.com
# SPECIFICATIONS & FEATURES

<table>
<thead>
<tr>
<th>Prestige model</th>
<th>Solo 80</th>
<th>Solo 110</th>
<th>Solo 155</th>
<th>Solo 175</th>
<th>Solo 25</th>
<th>Solo 299</th>
<th>Solo 399</th>
<th>Excellence 110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Modulation (MBH)</td>
<td>16 to 80</td>
<td>20 to 110</td>
<td>27.8 to 153</td>
<td>30.9 to 170</td>
<td>43.6 to 240</td>
<td>72.5 to 299</td>
<td>72.5 to 399</td>
<td>20 to 110</td>
</tr>
<tr>
<td>AFUE</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95.1%**</td>
<td>95%</td>
</tr>
<tr>
<td>DOE Heating Capacity (MBH)</td>
<td>74</td>
<td>102</td>
<td>142</td>
<td>157</td>
<td>222</td>
<td>278</td>
<td>379</td>
<td>102</td>
</tr>
<tr>
<td>Net Boiler AHRI Rating (MBH)</td>
<td>64</td>
<td>89</td>
<td>123</td>
<td>137</td>
<td>193</td>
<td>242</td>
<td>330</td>
<td>89</td>
</tr>
<tr>
<td>Fuel</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
</tr>
<tr>
<td>Turndown Ratio</td>
<td>5.0:1</td>
<td>5.5:1</td>
<td>5.5:1</td>
<td>5.5:1</td>
<td>5.5:1</td>
<td>4.1:1</td>
<td>5.5:1</td>
<td>5.5:1</td>
</tr>
<tr>
<td>Vent/Air Diameter</td>
<td>3”</td>
<td>3”</td>
<td>3”</td>
<td>3”</td>
<td>3”</td>
<td>4”</td>
<td>4”</td>
<td>3”</td>
</tr>
<tr>
<td>Supply/Return Connections</td>
<td>1&quot;</td>
<td>1&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/2&quot;</td>
<td>1-1/2&quot;</td>
<td>1&quot;</td>
</tr>
<tr>
<td>Gas Connections</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>3/4&quot;</td>
<td>3/4&quot;</td>
<td>3/4&quot;</td>
<td>1&quot;</td>
<td>1&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>Water Volume Gal</td>
<td>2.1</td>
<td>2.1</td>
<td>4</td>
<td>5.3</td>
<td>4.5</td>
<td>7.4</td>
<td>7.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Weight (Lbs)</td>
<td>103</td>
<td>103</td>
<td>118</td>
<td>128</td>
<td>140</td>
<td>210</td>
<td>216</td>
<td>190</td>
</tr>
<tr>
<td>Cabinet Height (inch)</td>
<td>36-9/16&quot;</td>
<td>36-9/16&quot;</td>
<td>36-9/16&quot;</td>
<td>36-9/16&quot;</td>
<td>36-9/16&quot;</td>
<td>39-3/8&quot;</td>
<td>39-3/8&quot;</td>
<td>39-3/8&quot;</td>
</tr>
<tr>
<td>10 Min. Peak Flow* (Gal.)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>55</td>
</tr>
<tr>
<td>1st Hour Rating* (GPH)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>210</td>
</tr>
<tr>
<td>Continuous Flow @ 70 Temp. Rise* (GPH)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>180</td>
</tr>
<tr>
<td>Domestic Inlet/Outlet</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3/4&quot;</td>
</tr>
<tr>
<td>Domestic Capacity (Gal.)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>14</td>
</tr>
</tbody>
</table>

*Domestic performance based on average water temperature of 108°F at mixing valve outlet and 50°F inlet
**Thermal Efficiency
Triangle Tube offers the Smart choice in domestic hot water

SMART 30 40 50 60 80 100 120

The Smart Series, Stainless Steel Indirect Fired Water Heater, heats more hot water with less fuel for the energy conscious consumer.

With exclusive Tank-in-Tank technology, the Smart delivers endless hot water with low maintenance and reliability.
Efficient and dependable

FEATURES & BENEFITS

- Exclusive Tank-in-Tank technology
- Lowest pressure drop in the industry
- Self cleaning / self descaling heat exchanger
- 2” polyurethane foam insulation
- Limited residential lifetime warranty
- Seven sizes to suit your customers needs
- Less fuel consumption, more energy conservation

Long term dependability
The average life span of a SMART Series Indirect Fired Water Heater exceeds 20 years! That is two or three times the average life of a conventional gas, oil or electric water heater.

Energy efficiency
The Smart series, stainless steel indirect fired water heater is heated by the hot water from your boiler. As your home is being heated, your domestic hot water is being heated at the same time, thereby, consuming less fuel and conserving energy. Combine this with a recovery rate that is up to three times faster than conventional gas or electric water heaters, and The SMART Series Indirect Fired Water Heater heats more hot water with less fuel for the energy conscious consumer.
### SPECIFICATIONS & FEATURES

<table>
<thead>
<tr>
<th>Smart model</th>
<th>Smart 30</th>
<th>Smart 40</th>
<th>Smart 50</th>
<th>Smart 60</th>
<th>Smart 80</th>
<th>Smart 100</th>
<th>Smart 120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>22”</td>
<td>22”</td>
<td>22”</td>
<td>22”</td>
<td>26”</td>
<td>26”</td>
<td>32”</td>
</tr>
<tr>
<td>Height</td>
<td>38”</td>
<td>46”</td>
<td>57”</td>
<td>66”</td>
<td>61”</td>
<td>78”</td>
<td>72”</td>
</tr>
<tr>
<td>Boiler/Supply Return</td>
<td>1”</td>
<td>1”</td>
<td>1 ¼”</td>
<td>1 ¼”</td>
<td>1 ½”</td>
<td>1 ½”</td>
<td>2”</td>
</tr>
<tr>
<td>Domestic Inlet/Outlet</td>
<td>3/4”</td>
<td>3/4”</td>
<td>3/4”</td>
<td>3/4”</td>
<td>1 ½”</td>
<td>1 ½”</td>
<td>1 ½”</td>
</tr>
<tr>
<td>3rd Domestic Connection*</td>
<td>3/4”</td>
<td>3/4”</td>
<td>3/4”</td>
<td>3/4”</td>
<td>1 ½”</td>
<td>1 ½”</td>
<td>1 ½”</td>
</tr>
<tr>
<td>Domestic Capacity (gal)</td>
<td>28</td>
<td>36</td>
<td>46</td>
<td>56</td>
<td>70</td>
<td>95</td>
<td>119</td>
</tr>
<tr>
<td>Heating Water Capacity (gal)</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>14</td>
<td>25</td>
<td>43</td>
</tr>
<tr>
<td>Heat Surface (sq. ft.)</td>
<td>13</td>
<td>16</td>
<td>20</td>
<td>24</td>
<td>28</td>
<td>36</td>
<td>42</td>
</tr>
<tr>
<td>Empty Weight (lbs)</td>
<td>115</td>
<td>135</td>
<td>165</td>
<td>190</td>
<td>271</td>
<td>362</td>
<td>479</td>
</tr>
<tr>
<td>Boiler Output (btu/hr)</td>
<td>87,000</td>
<td>112,000</td>
<td>140,000</td>
<td>270,000</td>
<td>300,000</td>
<td>337,000</td>
<td>420,000</td>
</tr>
<tr>
<td>1st Hour Recovery (gal/hr)</td>
<td>140</td>
<td>180</td>
<td>220</td>
<td>410</td>
<td>460</td>
<td>525</td>
<td>650</td>
</tr>
<tr>
<td>Continuous Flow (gal/hr)</td>
<td>115</td>
<td>150</td>
<td>185</td>
<td>360</td>
<td>400</td>
<td>450</td>
<td>560</td>
</tr>
<tr>
<td>Peak Flow (gal/10min)</td>
<td>40</td>
<td>50</td>
<td>65</td>
<td>100</td>
<td>125</td>
<td>150</td>
<td>190</td>
</tr>
</tbody>
</table>

Conditions: -200° boiler water supply.

### Limited lifetime warranty

*Triangle Tube hereby warrants the Triangle Tube water heater when properly registered with our factory at the time of purchase to be free from defects in material or workmanship. Triangle Tube will repair or, at its option, replace the component part. Limited lifetime warranty only applicable to residential installations.*
Exclusive Tank-in-Tank technology

Tank-in-Tank technology is a stainless steel hot water tank entirely immersed within an outer tank which contains the primary water. The corrugated inner stainless steel tank forms a large heat exchange surface that can heat the domestic hot water in a very short time. The outer tank is covered with a high-quality insulation, protected by a shock resistant plastic jacket.
The energy efficient, compact fit solution

CHALLENGER SOLO 50S 85S 105S 125S 150S
CHALLENGER COMBI 105 CC125

Our Challenger Boiler features a unique “Two in One” heat exchanger that provides both space heating and domestic hot water.

The unique heat exchanger in the Challenger heats domestic hot water directly, allowing the boiler to condense in the DHW mode and eliminating a separate heat exchanger and three-way valve.
Reliability without compromise

FEATURES & BENEFITS

- Up to 95% AFUE rating
- ASME stamped heat exchanger
- Indirect water heater compatible
- Cast aluminium heat exchanger with vertical flueways
- 10-year limited warranty, with 1-year parts warranty
- Turn-down ratio up to 6:2:1 with outdoor reset
- Whisper quiet operation
- Compact size, perfect for closet installation
- Easy service and maintenance

Best possible installation for optimal performance

The timesaver primary-secondary manifold is included with all Challenger boilers.

This pre-assembled manifold not only simplifies the installation, saving you time and money, but also ensures the best possible installation for peak performance and efficiency.

www.triangletube.com
### SPECIFICATIONS & FEATURES

<table>
<thead>
<tr>
<th>Challenger model</th>
<th>CC 50S</th>
<th>CC 85S</th>
<th>CC 105S</th>
<th>CC 125HS</th>
<th>CC 150S</th>
<th>CC 105</th>
<th>CC 125H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Modulation (MBH)</td>
<td>13.5 to 51</td>
<td>23 to 84</td>
<td>29 to 106</td>
<td>20 to 125</td>
<td>33 to 145</td>
<td>29 to 106</td>
<td>20 to 125</td>
</tr>
<tr>
<td>AFUE</td>
<td>95%</td>
<td>94%</td>
<td>94%</td>
<td>95%</td>
<td>92.3%</td>
<td>94%</td>
<td>95%</td>
</tr>
<tr>
<td>DOE Heating Capacity (MBH)</td>
<td>46</td>
<td>75</td>
<td>94</td>
<td>111</td>
<td>129</td>
<td>94</td>
<td>111</td>
</tr>
<tr>
<td>Net AHRI Rating (MBH)</td>
<td>40</td>
<td>65</td>
<td>82</td>
<td>97</td>
<td>112</td>
<td>82</td>
<td>97</td>
</tr>
<tr>
<td>Fuel</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
<td>NG &amp; LP</td>
</tr>
<tr>
<td>DHW flow rate at 70 F Temp. Rise (GPM)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>DHW minimum flow rate (GPM)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>DHW maximum temp. (F[C])</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>149 (65)</td>
<td>149 (65)</td>
</tr>
<tr>
<td>Maximum CH output temp. (F[C])</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>194 (90)</td>
<td>194 (90)</td>
</tr>
<tr>
<td>Cabinet Height (Inch)</td>
<td>23 1/4</td>
<td>23 1/4</td>
<td>25 1/2</td>
<td>28</td>
<td>28</td>
<td>25 1/2</td>
<td>28</td>
</tr>
<tr>
<td>Cabinet Depth (Inch)</td>
<td>9 1/2</td>
<td>9 1/2</td>
<td>9 1/2</td>
<td>9 1/2</td>
<td>9 1/2</td>
<td>9 1/2</td>
<td>9 1/2</td>
</tr>
<tr>
<td>Weight (Lbs)</td>
<td>66</td>
<td>66</td>
<td>73</td>
<td>80</td>
<td>80</td>
<td>73</td>
<td>80</td>
</tr>
</tbody>
</table>

---

**10-year limited warranty, 1-year limited parts**

Triangle Tube hereby warrants the Challenger Boiler, when properly registered with our factory at the time of purchase, to be free from defects in material or workmanship. Triangle Tube/Phase III will repair or, at its option, replace the component part under the conditions explained in shipping - assembly - installation, hereof.
**Smaller footprint**

The Challenger was designed to fit into the smallest of spaces.

Taking up less than 3ft, the Challenger can fit in a small storage area or utility closet. But with an attractive enclosure and whisper quiet operation, why hide it at all?
Powerful solutions for large residential and light commercial applications

KS 399T 500T 600T 750T 850T 100T 1200T

Keystone Condensing Boilers provide powerful solutions for large residential and light commercial applications with 5 models with inputs from 399 to 850 MBH.

These products feature a stainless steel heat exchanger with a thermal efficiency between 95 and 97%. Their compact design minimizes floor space while the cabinet provides easy access to all components.
Maximum efficiency

FEATURES & BENEFITS FOR BOILER AND WATER HEATER MODELS

- Up to 97% AFUE rating
- Stainless-steel heat exchanger - ASME certified
- Turndown ratio up to 10:1 with outdoor reset
- 10-year limited warranty, with 1-year parts warranty (Boiler models)
- 5-year limited warranty, with 1-year parts warranty (Hot water models)
- Large touchscreen color display
- PVC, PP, and SS Venting up to 100'
- Cascade up to 8 Units for a capacity of 4,800 MBH

Large color touch screen display

Our Keystone Boilers and Water Heaters feature a large color touch screen display with electronic PID modulating control stages for up to eight boilers. The large user friendly control interface makes set-up easy, meaning home owners or commercial applications are set up and ready to go in no time.

www.triangletube.com
High volume hot water with high energy efficiency

KW 199T 285T 399T 500T 600T 750T 850T 100T 1200T

Keystone Condensing Water Heaters produce high volume hot water with high energy efficiency.

These products feature a stainless steel heat exchanger with a thermal efficiency between 95 and 97%. Their compact design minimizes floor space while the cabinet provides easy access to all components.
### SPECIFICATIONS & FEATURES

<table>
<thead>
<tr>
<th>Boiler model</th>
<th>Fuel</th>
<th>Input MBH</th>
<th>Thermal Efficiency</th>
<th>DOE Heating Capacity</th>
<th>Turndown Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>KS 399 T</td>
<td>Natural Propane</td>
<td>80 - 399</td>
<td>96.5%</td>
<td>386</td>
<td>5:1</td>
</tr>
<tr>
<td>KS 500 T</td>
<td>Natural Propane</td>
<td>100 - 500</td>
<td>95%</td>
<td>475</td>
<td>5:1</td>
</tr>
<tr>
<td>KS 600 T</td>
<td>Natural Propane</td>
<td>120 - 600</td>
<td>96%</td>
<td>572</td>
<td>5:1</td>
</tr>
<tr>
<td>KS 750 T</td>
<td>Natural Propane</td>
<td>150 - 750</td>
<td>96.6%</td>
<td>724</td>
<td>5:1</td>
</tr>
<tr>
<td>KS 850 T</td>
<td>Natural Propane</td>
<td>170 - 850</td>
<td>95.7%</td>
<td>813</td>
<td>5:1</td>
</tr>
<tr>
<td>KS 1000 T</td>
<td>Natural Propane</td>
<td>100 - 1,000</td>
<td>94.2%</td>
<td>942</td>
<td>10:1</td>
</tr>
<tr>
<td>KS 1200 T</td>
<td>Natural Propane</td>
<td>120 - 1,200</td>
<td>94.8%</td>
<td>1120</td>
<td>10:1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water heater model</th>
<th>Fuel</th>
<th>Input MBH</th>
<th>Thermal Efficiency</th>
<th>Output MBH</th>
<th>Turndown Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW 199 T</td>
<td>Natural Propane</td>
<td>40 - 199</td>
<td>97%</td>
<td>193</td>
<td>5:1</td>
</tr>
<tr>
<td>KW 285 T</td>
<td>Natural Propane</td>
<td>57 - 285</td>
<td>95%</td>
<td>271</td>
<td>5:1</td>
</tr>
<tr>
<td>KW 399 T</td>
<td>Natural Propane</td>
<td>80 - 399</td>
<td>96%</td>
<td>383</td>
<td>5:1</td>
</tr>
<tr>
<td>KW 500 T</td>
<td>Natural Propane</td>
<td>100 - 500</td>
<td>96%</td>
<td>480</td>
<td>5:1</td>
</tr>
<tr>
<td>KW 600 T</td>
<td>Natural Propane</td>
<td>120 - 600</td>
<td>97%</td>
<td>582</td>
<td>5:1</td>
</tr>
<tr>
<td>KW 750 T</td>
<td>Natural Propane</td>
<td>150 - 750</td>
<td>94%</td>
<td>705</td>
<td>5:1</td>
</tr>
<tr>
<td>KW 850 T</td>
<td>Natural Propane</td>
<td>170 - 850</td>
<td>96%</td>
<td>816</td>
<td>5:1</td>
</tr>
<tr>
<td>KW 1000 T</td>
<td>Natural Propane</td>
<td>100 - 1,000</td>
<td>95%</td>
<td>950</td>
<td>10:1</td>
</tr>
<tr>
<td>KW 1200 T</td>
<td>Natural Propane</td>
<td>120 - 1,200</td>
<td>95%</td>
<td>1140</td>
<td>10:1</td>
</tr>
</tbody>
</table>

**5-year (KW Models) and 10-year (KS Models) limited warranty**

Triangle Tube hereby warrants the Keystone Condensing Boiler &/or Keystone Condensing Water Heater when properly registered with our factory at the time of purchase to be free from defects in material or workmanship. Triangle Tube will repair or, at its option, replace the component part under the conditions explained, hereof.
An ideal heating system for swimming pools, hot tubs & spas

TRIANGLE TUBE MAXI FLO

The Triangle Tube Maxi Flo heat exchanger, when combined with any boiler, makes for an ideal heating system for swimming pool, spa and hot tub application.

Available in 5 sizes, ranging from 95,000 to 400,000 BTU/hr thermal output which can accommodate any size pool or spa.
Available in stainless-steel and titanium

**FEATURES & BENEFITS**

- Available in five sizes from 95,000 to 400,000 BTU

- Significant energy savings

- Built-in flow restrictor to assure maximum heat exchange

- Light-weight and compact in size, with a minimum installation space

- Constructed of high quality corrosion resistant stainless steel (AISI 316)

- Designed to minimize pressure loss in the heating system

- Limited residential lifetime warranty

---

Made from robust materials
Titanium is chosen for the high resistance to corrosion and is suitable for pools and spas with aggressive water, salt water and when a salt chlorine is used.

www.triangletube.com
Become Triangle Tube trained in our state-of-the-art facilities

Triangle Tube Academy

Training seminars are held all year round at various locations throughout North America, including our state-of-the-art live fire room at the Triangle Tube headquarters in West Deptford, New Jersey.

Our facilities provide hands-on training led by our experienced and knowledgeable instructors. A full calendar of locations and how to register can be found at www.triangletube.com

---

REAL WORLD APPLICATION

Lead technicians will give contractors the competitive edge with extensive training on real-world application.

EXCLUSIVE PRODUCT INSIGHT

Including classroom seminars and hands-on work, installers will gain comprehensive knowledge of Triangle Tube products.

LIVE FIRE LAB INSTALLATION FOCUS

Training in our live fire lab focuses on proper installation practices, system and pump sizing and troubleshooting.
Don’t just take our word for it...

I enjoy installing Triangle Tube boilers and on-demand hot water systems because I know I’m working with a product that is well made and quality built.

The boilers are reliable with a well made heat exchanger. Triangle Tube also has great tech support when and if I need them. My customers are always satisfied and pleased with Triangle Tube.

PETE YUKNEVICH,
Pete’s Plumbing
Pine Bush, NY

We not only put Triangle Tube Prestige boilers and Smart tanks in projects that we’re working on - I also have them in my own home. I recently upgraded my hot water tank to a Triangle Tube. I removed a less efficient, larger tank, with one that has two heat exchangers. So far it has been flawless!

I chose Triangle Tube not only for all my projects that I have worked on, but for my own home.”

BRENT FRANICH,
South Sound Hydronics
Tacoma, WA

The best part of working with Triangle Tube is the unrivaled technical support.

People hire me not just based on the price but based on the guarantee they’re going to get! I can’t offer that guarantee with any other product so that’s another reason why I use Triangle Tube.

JEFF WHITNEY,
JR Whitney Plumbing Company
Colorado Springs, CO
My favorite feature on the newest units are the fact that you can change the pumps and customize them to change the relays - that's really nice.”

CHRIS CHERRY,
Plumb Tec
Winter Park, CO

We’ve always used Triangle Tube’s boilers because the fire tube boiler is a good design. We’ve tried a few other boilers that have issues with venting at high altitude and tuning them is difficult, so we just stick with Triangle Tube.

We want to see your installs!

Show off your installation. Send us your pictures at info@triangletube.com
When you install a Triangle Tube product, you can trust that you have chosen products built with a focus on quality and reliability.

Your customers can be sure you’ve delivered total comfort and peace of mind with heating and hot water products they can rely on.
Customer Service
856 - 228 - 8881 ext:150
Email:
technicalsupport@triangletube.com
customerservices@triangletube.com
warranty@triangletube.com

Corporate Office
856 - 228 - 8881
Email:
sales@triangletube.com
info@triangletube.com

Triangle Tube reserves the right to make product changes or improvements.

2019-24 Range Guide